

Abstract of the Disclosure

A radially deployable covered stent that predictably and dependably expands to an increased diameter state at relatively low deployment pressures while concomitantly minimizing the risk of tearing of the stent covering during expansion. The stent covering includes an inner cover and an outer cover that are bonded together through and around the stent structure to cover the stent. The stent cover is constructed from expanded polytetrafluoroethylene (ePTFE) having a structure of nodes interconnected by fibrils. The stent covering has a radial thickness of at least about 0.008" and an average internodal distance (IND) of at least about 100 microns when the stent is in the reduced diameter, unexpanded state. The covered stent deploys at an average deployment pressure of less than or equal to about 10 atm. A method for covering a stent structure according to the present invention includes placing a compression member in the form of a tubular sleeve over the outer cover and heating the compressed covered stent to bond the inner cover to the outer cover. An adhesive in the form of an aqueous dispersion of PTFE can be applied to either the inner cover or the outer cover to facilitate bonding of the inner cover to the outer cover.

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